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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,020	12/26/2001	Luder Gerking	073306.0101	5657

7590 01/21/2004  
Baker Botts  
One Shell Plaza  
910 Louisiana Street  
Houston, TX 77002-4995

EXAMINER  
EASHOO, MARK

ART UNIT PAPER NUMBER  
1732

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.	Applicant(s)	
10/030,020	GERKING, LUDER	
Examiner	Art Unit	
Mark Eashoo, Ph.D.	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) n/a.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of claim group I, claims 1-7, in the papers filed 17-SEP-2003 is acknowledged. The traversal is on the ground(s) that claim groups I (method) and II (apparatus) relate to a single inventive concept. Applicant's arguments are not found persuasive because the special technical feature of claim group II, a spinning head comprising a Laval nozzle in fixed relationship to a spin hole is clearly taught by Nyssen et al. (US pat. 5,260,003) (see Fig. 2 and 2:4-3:68).

The requirement is still deemed proper and is therefore made FINAL.

Claims 8-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claim groupings, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the papers filed 17-SEP-2003.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 1 recites a plurality of process steps without being separated by a line indentation which renders the claim indefinite because it cannot be clearly ascertained when one step ends and another begins. It is noted that where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. See 37 CFR 1.75(i).

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nyssen et al. (US Pat. 5,260,003).

Regarding claim 1: Nyssen et al. teaches the claimed process of manufacturing fine threads from meltable polymers. (example); melt spun from at least one spin hole (1:60-2:3 and Fig. 2); and passing a melt stream through a Laval nozzle for drawing (Fig. 2 and 2:4-3:68). Nyssen et al. teaches a pressure ratio of 0.53 at various sonic speeds and temperatures (6:9-37), therefore it is inherent that the pressures and speeds of the gas streams in the Laval nozzle are controlled in a manner which produces a plurality of fibers/threads.

Regarding claim 2: Nyssen et al. is silent with regard to a laminar gas flow. However, it is inherent that the gas flow must be controlled in a laminar fashion otherwise air turbulence would cause the melt stream to move in a random pattern and would end up contacting a wall of the nozzle thereby ruining the steady state of the production process.

Regarding claim 3: Nyssen et al. teaches a pressure ratio of 0.53 at various sonic speeds and temperatures (6:9-37). Since the instant limitations "space behind" is at best a relative position, it is inherent that the recited pressure ratio is inclusive of a pressure "behind" the nozzle.

Regarding claim 4: Nyssen et al. teaches an air temperature of 285°C (example). Furthermore, it is inherent that the air would have a temperature, as every material does, as it is supplied to the process (see 4:61-68).

Regarding claim 5: Nyssen et al. teaches that the lower pressure of the nozzle is open to the atmosphere (Fig. 1), which is substantially at 1.01 bar. Nyssen et al. further teaches a pressure in the nozzle of 2 - 2.2 bar (example). Therefore, the ratio above and below the nozzle is between 1.02 and 2.5.

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Regarding claim 7: Nyssen et al. teaches a plurality threads which are spun, split, and deposited to form a non-woven fabric (Fig. 1 and 4:56-5:25).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see enclosed form PTO-892).

#### *Allowable Subject Matter*

Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or render obvious the manufacture of fine threads wherein a melt thread is radiatively heated in the region of a Laval Nozzle. The examiner has interpreted the phrase "in the region" as being near the portion of highest physical constriction (ie. narrowest point of the nozzle).

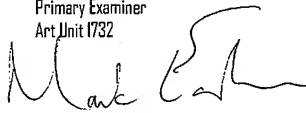
#### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaizzi can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Mark Eashoo, Ph.D.  
Primary Examiner  
Art Unit 1732



11/12/04

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1/12/04